



DATE: July 9, 1980

TO: Fred Rubel, Chief ER&HMI Branch, EPA, Edison, N.J.

FROM: John Bee, TAT Team, Ecology and Environment, Inc. *JMB*  
Region II; Gad Towadros, ER&HMI Branch, EPA II

SUBJECT: Fire at Duane Marine, Perth Amboy, N.J. on July 7, 1980

July 7

0925 hrs On July 7, the U.S. Coast Guard on Governor's Island received notice from the N.Y. Volunteer Fire Service that smoke had been seen rising from the waterfront at Perth Amboy (See Appendix 1).

1005 hrs EPA Region II helicopter radioed in observations that there was a major fire in Perth Amboy, south of the Outerbridge crossing. The sign on a watertower near the fire scene indicated General Cable was an occupant in this industrial complex. Drums of chemical were reported nearby. The wind direction was from the northwest.

1011 hrs New Jersey Department of Environmental Protection (NJDEP) was telephoned (George Tyler and Karl Birns were not in, a message was left for John Vernam who was on another telephone line).

1045 hrs John Vernam indicated the State (NJDEP) was on scene and would provide us with an update as information was obtained.

1220 hrs Paul Elliot (EPA, Region II) arrived at the fire scene and made contact with NJDEP personnel. They had spill response and air section persons present.

It was noted that crowd control was fairly effective. A danger line was located one block from the fire and marked by ropes and barriers across the street. The block to the SSE of the industrial complex was evacuated to the extent that the persons living there would leave.

The winds were from the NW 5-15 knots. The smoke from the fire was being carried over the Arthur Kill away from Perth Amboy towards Staten Island and the Raritan Bay (See site map 1).

1300 hrs Paul Arbesman (NJDEP) arrived on scene. He stated that the state had contracted New Jersey Institute of Technology to undertake an air sampling study.

This information was relayed to Fred Rubel by radio. In addition it was relayed that two New York Fire boats

were being called in. Paul Elliot also reported that there was fire throughout the entire industrial complex: roofs and building walls were collapsing. Fire fighters had to play water on the blaze from the opposite side of the streets, on the perimeters of the complex.

The potential for the involvement of the Duane Marine hazardous waste storage facility was becoming apparent as the fire spread further. The EPA helicopter picked up reports from the Coast Guard helicopter that drums were exploding.

- 1400 hrs Fred Rubel and Kenneth Stoller left Edison by helicopter to take air monitoring readings. To the north, west and south of the plume (which rose to an estimated 1500 ft.) the air provided no readings of contaminants on the photoionization detector at 300 feet. A negative result was obtained using a detector tube for gasoline (a tube which might have indicated volatile hydrocarbons below the part per million level). This indicated that organic pollutants were not detectable beyond the visible dense particulate smoke plume at the fire.
- 1415 hrs The EPA helicopter returned to EPA Edison, and reported the results to Paul Arbesman of NJDEP on scene.
- 1435-  
1500 hrs The Coast Guard took water samples J1-J5 in the Arthur Kill adjacent to the Perth Amboy shore (See Site Map 1). The results were analysed at EPA Edison. All samples contained methyl sulfide: J5 also contained 1-1-1 Trichloroethane, Toluene, and Ethylbenzene at 10-30 ppb. (Bob Sauber of NJDEP was notified of the results at 1700 hr.)
- 1530 hrs Air monitoring teams were dispatched to Staten Island (Mobile 1) and along the shore of New Jersey (Mobile 2), where the smoke plume might have been headed.

NJDEP requested support regarding analysis of water samples and this was agreed to. Gad Towadros (EPA Edison) and John Bee (TAT Team) in Mobile 1 arrived on scene in Perth Amboy at 1600 hours, and made contact with Frank Marshall NJDOH at Washington Street and High Street. Mr. Marshall was just emerging from the smoking building. He reported a reading of 10 ppm of HCl in the smoke (the threshold limit value for HCl is 5 ppm).

Mobile 1 then took water sample jars to the DEP Headquarters, a command van in the car park of the Perth Amboy Police Headquarters. A mobile telephone was also handed over and a direct link established between the DEP command van in Perth Amboy and EPA Edison Emergency Response Room.

1635

At 1635 hours, the plume was observed rising vertically (to about 1500 feet), and did not appear to be threatening ground level as was reported between 1600 and 1630 hours.

1705

Smoke was noted rising steeply to the Northwest.

HNU readings at foot of Amboy Avenue: (GJ1)

0-20 range - zero

0-200 range - zero

0-2000 range - zero

1710

In the base of the plume 200 yards north of the foot of Amboy Avenue HNU readings: (GJ2)

0-20 range - zero

0-200 range - zero

0-2000 range - zero

1715

A MSA detector tube for Hydrogen Chloride gave a negative reading. (GJ2)

The plume was again reported to be rising vertically and did not appear to affect the surrounding community at ground level, as most flames were reported to be out, and the smoke plume appeared headed toward Staten Island.

1720-1755 (Reading for air pumped: 367414 to 375981) A carbon monoxide tube was mounted in a portable pump (personal sampler). A large volume of air was sucked through this detector tube with negative results. (GJ2)

1725

The wind changed to blowing towards the northeast.

1730

A Phosgene MSA detector tube (not in the plume) gave negative result. (GJ2) The plume was passing 400-700 feet over Staten Island.

1735

The wind changed, blowing to the east towards Mobile 1.

1737

A Hydrogen Cyanide MSA detector tube gave negative result in the base of the plume (faint dispersed smoke). (GJ2)

Photoionization detector readings: (GJ2)

0-20 range - zero

0-200 range - zero

0-2000 range - zero

1740

Mobile 1 met with Anise Cirocco of NYDEC - she inspected the sampling station. (GJ2)

1805

A photoionization detector reading was taken outside 234 Breyhaut (300 yards nearer the shore from the intersection Breyhaut and Amboy Road. The plume was passing above Mobile 1: faint and dispersed. The reading was taken on the highest ground in the area.

Photoionization readings: (GJ3)

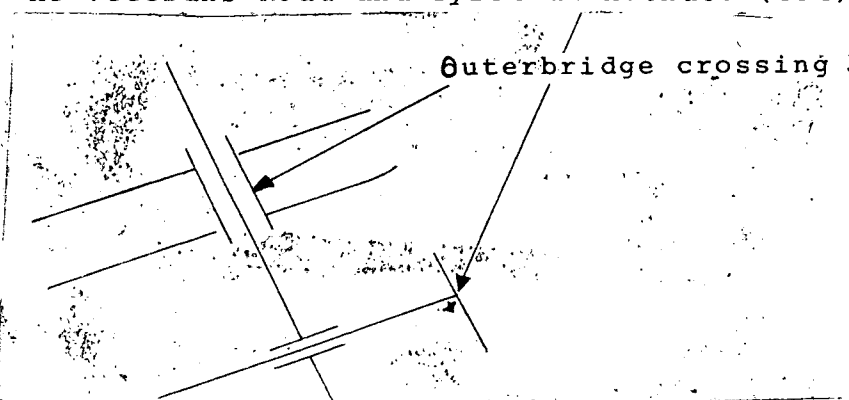
0-20 range - zero

0-200 range - zero

0-2000 range - zero

1810

At Veterans Road and Tyrellan Avenue: (GJ4)



Photoionization readings:

0-20 range - zero  
0-200 range - zero  
0-2000 range - zero

1830

Ken Stoller and Fred Rubel rendezvoused with John Bee and Gad Towadros (EPA) on scene, and then met with NJDEP officials for a briefing.

Between 1830 - 2000 hours Gad Towadros and Ken Stoller took readings with the HNU photoionization detector at the following locations:

Berkley Avenue at the waterfront (GK5)  
Front of 5516 Arthur Kill Road (GK6)  
Foot of Amboy Road (GK7)  
Foot of Hyland Boulevard (GK8)

All the readings indicated zero or negligible readings for photoionizing chemicals in the air.

July 8  
0930

Bruce Comfort of NJDEP reported water analyses were not indicating a problem:

Cyanide  
Lead  
Arsenic  
Volatile organics/aromatics  
Pesticides  
PCBs  
Hexavaleat Chromium  
Total Chromium

all in the low ppb  
range (10 to 20)

= 67 ppb (highest reading)

Samples were: 1 background + 5 or 6 stations the total chromium reading of 67 ppb was reportedly from the background sample. These samples were reportedly taken about 4 hours after the water sample J1-J5 were submitted to EPA.

Sampling Results from Mobile 2

Date: 7/7/80

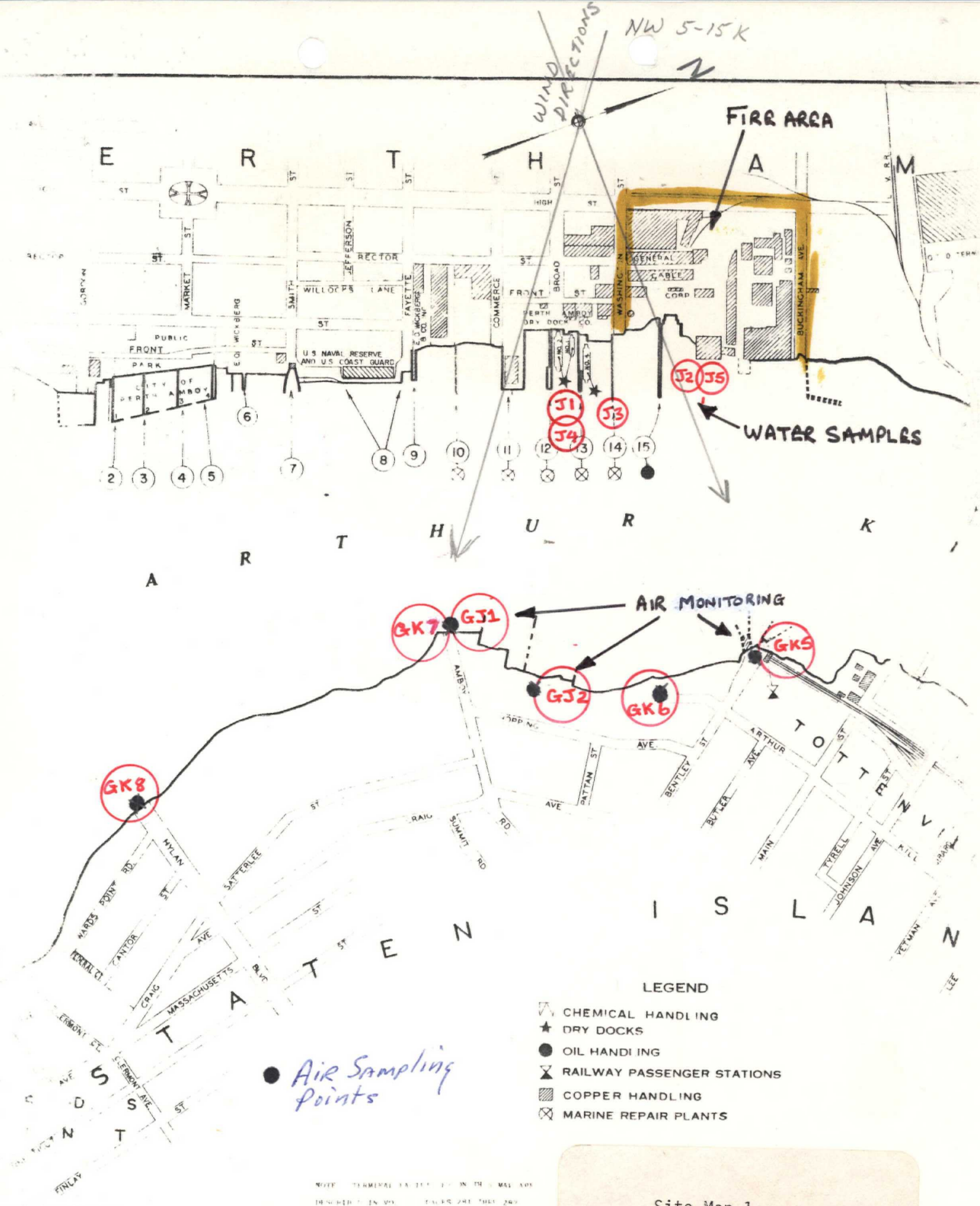
Operators: Laurence Bernson  
David Levine

Equipment: Model Pl 101 Photoionization  
Analyzer

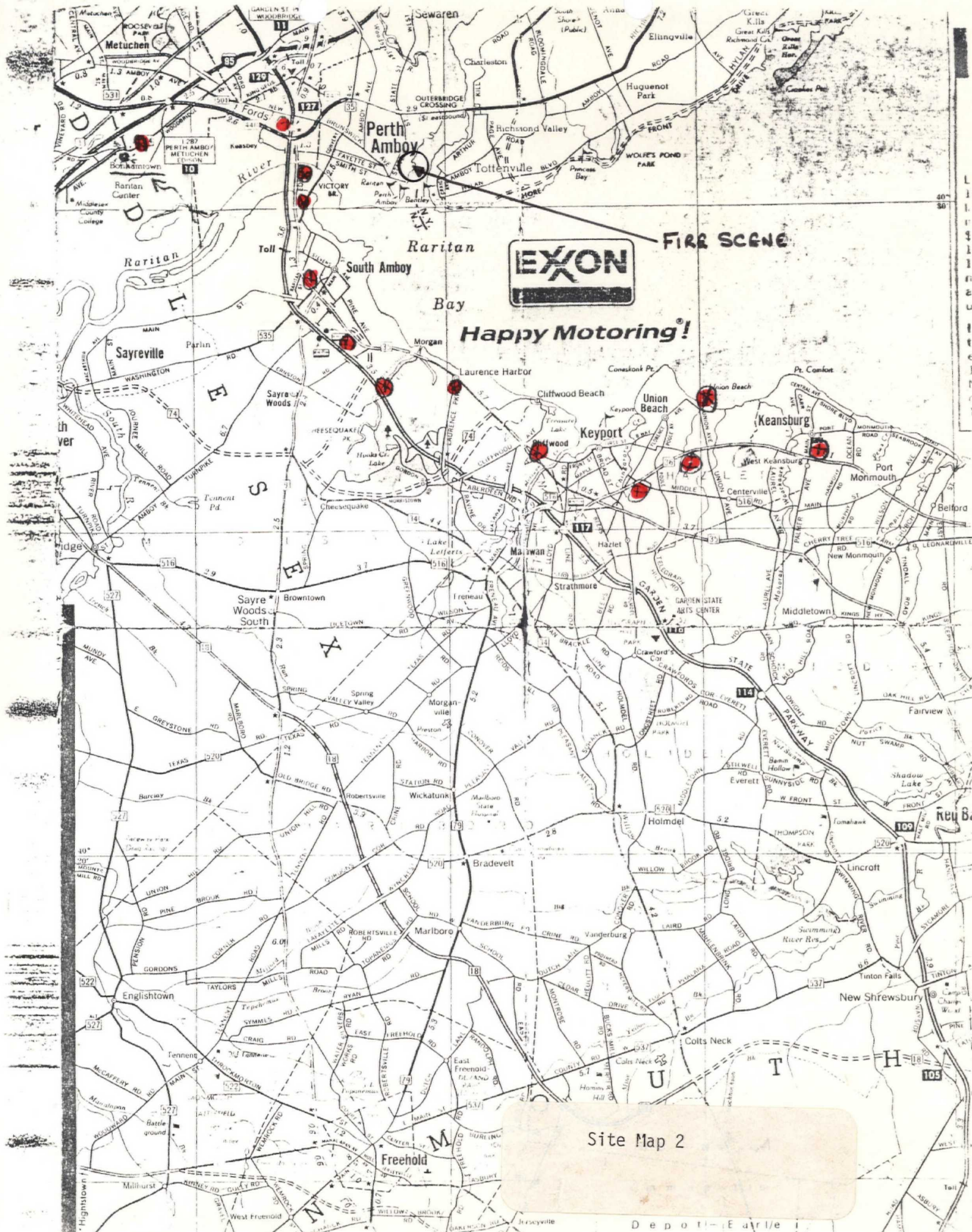
Settings: 1. span dial 1.00\*  
2. range 0-20 ppm

<u>Sites</u>	<u>Time</u>	<u>Reading</u>
Woodbridge Ave., Edison	1545	2
Route 9 and Parkway entrance	1530	2.2
Edison Bridge	1552	2.8
Route 9 and Route 35 circle	1554	1.6
S. Amboy car wash on Rt. 35	1604	1.5
Fairview Avenue and Rt. 35	1606	1
Cheesequake Creek	1612	1
Laurence Pkwy. and Rt. 35	1618	1
Riverdale Rd. and Rt. 35	1625	1
Rt. 36 and Van Dorn St.	1629	0.9
Poole Avenue and Rt. 36	1636	1
Union Beach	1645	1
Thompson Ave. and Rt. 36	1658	1
Main St. and Rt. 36	1700	1
Central Ave. and Rt. 36	1707	1

\*(note) - according to instruction manual the span potentiometer is turned to smaller numbers to increase sensitivity. By changing the span setting from 10.0 to 1.0 the sensitivity is increased ten fold. Therefore, the 0-20 ppm scale becomes 0-2 ppm full scale.







Happy Motoring!

FIRE SCENE

Site Map 2



*Fred E*

CCVASVSHV

CC AS SH DE NY  
 CC T AUTODIN/CCGDIHREE  
 ISN-NY/64  
 C O R C Y  
 P 071744Z JUL 80  
 FM COGARD COIP NEW YORK NY  
 TO CCGDIHREE NEW YORK NY  
 INFO COGARD AIRSTA BROOKLYN NY  
 COMCOGARDGRU SANDY HOOK NJ  
 NATIONAL RESPONSE CENTER WASHINGTON DC  
 ZEN/EPA REGION TWO EDISON NJ  
 ZEN/NEW JERSEY STATE DEPT ENVIRONMENTAL PROTECTION  
 BT

UNCLAS //N16130//

SUBJ: SITREP ONE FIRE, PERTH AMBOY, N.J. POSSIBLE  
 INVOLVEMENT OF CHEMICAL STORAGE FACILITY

## 1. SITUATION:

A. 27 JUL IP FIRE STARTED AT PERTH AMBOY INDUSTRIAL PARK, OUT OF  
 CONTROL BORDERS DUANE MARINE WHICH STORES WASTE CHEMICALS,  
 PRINCIPALLY STYRENE FIRE IS INLAND, CG 41361 O/S, CGC MANITOU  
 E/R ETA 1330

B. ARTHUR KILL CLOED FROM OUTERBRIDGE SOUTH TO WARDS POINT

## 2. ACTION TAKEN:

A. 070925Q JUL 80 RCVD CALL FM VTS N.Y. THAT THEY SPOTTED SMOKE  
 ON WATERFRONT.

B. 0930Q CONTACTED PERTH AMBOY FIRE DEPT, FIRE NOT ON WATERFRONT,  
 NO CG ASSISTANCE IS REQUIRED, FIRE IS REPORTED NEXT DOOR TO DUANE  
 MARINE

C. 0952Q CONTACTED DUANE MARINE

D. 1030Q FIRE ESCALATING

E. 1045Q REQUESTED HELO OVERFLIGHT FM RCC

F. 1125Q PERTH AMBOY FIRE DEPT REQUEST CG ASSISTANCE AS FIRE IS  
 SPREADING TOWARDS WATERFRONT.

G. 1215Q DUANE MARINE CHEMICAL STORAGE DRUMS BEGINNING TO  
 EXPLODE

H. 1216Q NOTIFIED N.J. DEP, NY DEC, FEDERAL EPA.

I. 1310Q NOTIFIED NYC MAYORS OFFICE

## 3. FUTURE PLANS AND RECOMMENDATIONS:

A. CONTINUE MONITOR AND ASSIST AS REQUIRED

B. FURTHER DETAILS TO FOLLOW

## 4. CASE PENDING

BT

TOD-07:07:18:25

NNNN

*Edo*  
*W/OEO/8438*  
*THANK*

**ODO**

CO/XO	<input checked="" type="checkbox"/>	SNO	
OPS	<input checked="" type="checkbox"/>	PERS	
PSO		A/N	
WPO		STA	
ENG		SUPP	

DEVELOPMENTS)

BT

DRAFTED BY

RELEASED BY



CC T DIST/COMDT/NATIONAL RESPONSE

P 080009Z JUL 80

FM COGARD COTP NEW YORK NY

TO CCGDTHREE NEW YORK NY

INFO COGARD AIRSTA BROOKLYN NY

COMDT COGARD WASHINGTON DC

COMCOGARD GRU SANDY HOOK NJ

NATIONAL RESPONSE CENTER WASHINGTON DC

ZEN/EPA REGION TWO EDISON NJ

ZEN/NEW JERSEY STATE DEPT OF ENVIRONMENTAL PROTECTION

CG GRNC

BT

UNCLAS//N16130//

SUBJ: SITREP THREE MAJOR FIRE PERTH AMBOY NJ

1. SITUATION:

A. 1800G FIRE REPORTED UNDER CONTROL AND SMOKE HAS CHANGED FROM BLACK TO GRAY. AREA MOSTLY CONFINED TO APPROX ONE LARGE SQUARE BLOCK.

B. FIRE FIGHTING CONTINUING UNDER STATE COORDINATION. TWO NYC FIRE BOATS, CGC MANITOU AND CG 32328 O/S ASSISTING PERTH AMBOY FD. ADJACENT MUNICIPAL FIRE DEPARTMENTS AND NATIONAL GUARD ASSISTING SHORESIDE FIRE FIGHTING EFFORTS.

C. SEVERAL BUILDINGS DESTROYED, APPROX 2000 DRUMS WASTE CHEMICALS AT DUANE MARINE CONSUMED, NEARBY PROPANE AND WASTE OIL TANKS SAVED WITH DIMINISHING THREAT, SEVERAL SMALL BOATS AT DUANE MARINE BURNED, 1 CRANE BARGE MOORED IN AREA BURNED.

D. NO SIGNIFICANT WATER POLLUTION, VERY MINOR RUNOFF INTO ARTHUR KILL; CG MONITORING POTENTIAL FOR WATER POLLUTION. EPA AND NJDEP MONITORING AIR QUALITY REVEALING VERY LOW ORGANIC VAPOR READINGS AROUND PLUME. SMOKE RISING HIGH BEFORE BLOWING TOWARD OCEAN.

E. ARTHUR KILL REMAINS CLOSED FROM OUTERBRIDGE CROSSING TO WARDS PT BUT OCCASIONAL TRAFFICE BEING CLEARED THRU ON CASE BY CASE BASIS PENDING SITUATION. CGC MANITOU EFFECTING TRAFFIC CONTROL.

F. WX: AS BEFORE

G. CONTINUED HEAVY MEDIA INTEREST. UNCONFIRMED BUT MEDIA REPORTING ARSON SUSPECTED.

2. ACTION TAKEN:

A. CONTINUED O/S CG REPRESENTATION, FIRE FIGHTING ASSISTANCE, AND TRAFFIC CONTROL.

B. STATE/LOCAL AUTHORITY COORDINATED PRESS CONFERENCES.

3. FUTURE PLANS AND RECOMMENDATIONS:

A. CONTINUED ASSISTANCE AS REQUIRED

B. ANTICIPATE REOPENING ARTHUR KILL TO ALL VESSEL TRAFFIC BY EVENING.

C. POSSIBLE OVERFLIGHT REQUEST AM 8 JUL PENDING DEVELOPMENTS.

D. NEXT SITREP AM 8 JUL.

BT

07:03:00:28

NNNN

EPA/NT  
NJDEP

Mail

08 July 80

ag

CO/XO	✓	SNO	
OPS	✓	PERS	
PSO	✓	A/N	
WPO	✓	STA	
ENG		SUPP	

ODO

WEST



VIEW FROM FOOT OF AMBOY  
AVENUE WESTWARD TOWARDS  
FIRE. SMOKE BLOWING  
NORTHEAST AT 1705.

WEST





SOUTHWEST



PARAPET OF BRIDGE

SOUTHWEST

FIRE

VIEW FROM OUTERBRIDGE  
CROSSING BRIDGE LOOKING  
SOUTHWEST AT 1650 HOURS





1710 HOURS IN THE BOTTOM  
OF THE PLUME, TAKING  
PHOTO-IONIZATION READ-  
INGS. CARBON MONOXIDE,  
PHOSGENE, HYDROGEN CY-  
ANIDE - ALL NEGATIVE.  
WIND BLOWING ACROSS TO  
AMBOY AVENUE TO THE EAST.

PLUME RISING OVER STATEN  
ISLAND



WIND CHANGE, BLOWING NOW  
TO THE NORTHEAST AT 1720





FIRE SCENE AT 1630 HOURS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

July 9, 1980

Air Sampling - Staten Island - Fire, Explosion, Duane Marine

Gad Tawadros  
Emergency Response Section

Fred N. Rubel, Chief  
Emergency Response & Hazardous Materials Inspection Branch

THRU: Paul R. Elliot, Chief  
Emergency Response Section

On July 7th and 8th, USEPA officials from ER&HMI Branch visited Staten Island to investigate possible pollution related problems caused by the "Industrial Park" Perth Amboy fire and ensuing explosions.

Air samples were taken to search for suspected toxic chemicals which may have been released by the fire. The photoionization detector did not reveal the presence of any organic vapors. Various other type of detector tubes also failed to indicate the presence of carbon monoxide, phosgene, hydrogen chloride and hydrogen cyanide.

The samples were taken between 1700 and 2000 hours on July 7th, and between 0800 through 0930 hours on July 8th at the following locations:

Tip of Amboy Road  
234 Breyhaut Road  
Tyrellan Avenue and Veterans Road West  
Bentley Avenue at Water Front  
Front of 5516 Arther Kill Road  
Foot of Amboy Road  
Foot of Hyland Boulevard

2-SA-ERHMIB:GTawadros:jkw:Bldg. 209:X6648

CONCURRENCES			
SYMBOL	SA/ERHMIB	SA/ERHMIB	SA/ERHMIB
SURNAME	TAWADROS	ELLIOT	RUBEL
DATE	7/9/80	7/9/80	7/9/80